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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/058,386 | 01/30/2002 | Mutsumi Hamaguchi | 2936-0148P | 7555 |

2292 7590 01/27/2005

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

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| EXAMINER |
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JELINEK, BRIAN J

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| ART UNIT | PAPER NUMBER |
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2615

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,386

Applicant(s)

HAMAGUCHI, MUTSUMI

Examiner

Brian Jelinek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-16 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/30, 10/24.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

This is a first office action in response to application no. 10/058,386 filed on 1/30/2002 in which claims 1-16 are presented for examination.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Wingen (U.S. Pat. No. 5,754,614).

Regarding claim 1, Wingen discloses a Gray code counter (Fig. 4) comprising: a consecutively counting Gray code counter that counts in increments or decrements of one (Fig. 4, element 59); and an output value converter circuit (Fig. 2), wherein the output value converter circuit converts Gray code data output from the consecutively counting Gray code counter into a Gray code corresponding to a decimal count as obtained by counting with (2 raised to

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a particular power minus 1) counts skipped at a time, where the particular power is zero and zero counts are skipped (i.e., a consecutive counter).

Allowable Subject Matter

Claims 2-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, the reason for allowance is as follows: the prior art does not disclose or fairly suggest outputting the highest (N-M) bits by using, as data of an $(\alpha + M)$ th bit, data of an α th bit belonging to lowest (N-M) bits of the Gray code data output from the consecutively counting Gray code counter, and outputting remaining lowest M bits by inverting data of an (M-1)th bit every time a count changes, and by keeping data of (M-2)th and lower bits, if any, constant at "0."

Regarding claim 3, the reason for allowance is as follows: the prior art does not disclose or fairly suggest an input value converter circuit and a count start data setting circuit, wherein, when counting is performed with a predetermined number of counts skipped at a time, the input value converter circuit converts, according to the number of counts skipped, Gray code data corresponding to a decimal count at which to start counting into a Gray code corresponding to a decimal count as obtained when counting is performed consecutively, and the count start data setting circuit controls an initial state of

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the consecutively counting Gray code counter according to the Gray code data output from the input value converter circuit.

Regarding claim 5, the reason for allowance is as follows: the prior art does not disclose or fairly suggest the output value converter circuit comprises a selector circuit, and, according to an external signal, the selector circuit chooses whether to output the Gray code data output from the consecutively counting Gray code counter intact or to convert the Gray code data output from the consecutively counting Gray code counter into a Gray code corresponding to a decimal count as obtained by counting with $(2 \text{ raised to a particular power minus } 1)$ counts skipped at a time.

Claims 9-16 are allowed.

Regarding claims 9 and 13, please see the reason for allowance of claim 5.

Regarding claims 10-12, and 14-16, the reason for allowance is as follows: the claims depend from an allowable independent claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Jelinek whose telephone number is (703) 305-4724. The examiner can normally be reached on M-F 8:00 am - 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Jelinek
1/21/2005



ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600